

BUR9-1999-0300US1  
Amendment dated 12/07/2005

09/691,353  
Reply to office action mailed 09/07/2005

01240162aa

### **REMARKS**

Claims 1 and 14-30 are currently pending in the application. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each .

The Examiner's withdrawal of the prior rejection based on the Doyle reference is acknowledged with appreciation.

The Examiner now rejects claims 1 and 14-30 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,563,131 to Adkisson *et al.* (the Adkisson '131 patent). Adkisson '131 is directed to a dual/wrap-around gate field effect transistor. The methodology comprises patterning a doped silicon layer to form separated gate and source structures, forming a trough in the gate and source structures, forming an oxide film in the trough in the gate structure, and epitaxially growing a conduction channel and a drain region from the source structure through the gate structure. By contrast, the present invention is directed to a dual gate metal oxide semiconductor field effect transistor (MOSFET) having relatively thin epitaxially grown channels. In particular, the methodology of the present invention is designed to produce an epitaxially grown channel having a channel width in the range of 5 - 50 nm. The methodology comprises forming a silicon layer on a substrate, the layer having exposed vertical sides able to support epitaxial growth, forming an epitaxial channel on each of the vertical sides, removing one of the sides and the original layer, and then forming the gate.

It will be observed that while both inventions seek to provide a thin channel for the FET, and use epitaxial growth for the channel, the methodologies are quite different. Adkisson '131 begins with a gate and grows a channel, whereas the present invention begins with a "fin" (a vertical layer) upon which a channel is grown, but where the "fin" is removed and the gate is then formed. These are radically different methodologies. There has been no showing how the present invention would be

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obvious from Adkisson '131. In particular, the citations to Adkisson '131 used to match against the claim language of the present invention do not, as matched, track Adkisson '131. For example, it is clear in the present invention that the gate is formed at the end of the process, whereas in Adkisson '131 the gate is formed at the beginning. Arbitrarily reordering the Adkisson '131 method steps makes Adkisson '131 inoperative, and indicates an impermissible use of hindsight.

The Examiner notes that the applied reference has a common assignee with the present invention. Indeed, four of the inventors of the Adkisson '131 patent are also listed as inventors of the present invention. The Examiner has indicated that this ground of rejection may be overcome by a showing under 37 C.F.R. §1.132 that any invention disclosed but not claimed in Adkisson '131 was derived from the inventors of the present application and is thus not the invention "by another" as required by 35 U.S.C. §102(e). A suitable showing under 37 C.F.R. §1.132 is provided in the attached Appendix A, as an alternative basis for overcoming this ground of rejection. It should be noted that nothing in the Article 132 Declaration concedes that Adkisson '131 provides disclosure of the claimed invention, but only that "any subject matter disclosed but not claimed in Adkisson '131 and described in the present invention was derived solely from" the common inventors. This is sufficient for the conclusion that, whatever the unclaimed disclosure in Adkisson '131, anything from Adkisson '131 that is described and claimed in the present invention was derived from inventors of the present application and is thus not the invention "by another".

In view of the foregoing, it is requested that the application be reconsidered, that claims 1 and 14-30 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

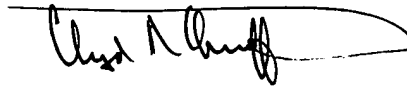
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If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account 09-0456 (IBM-Burlington).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Clyde R Christofferson", written over a horizontal line.

Clyde R Christofferson  
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## **APPENDIX A**